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JCS86 U.S. DEPT. OF COMMERCE

PTO-1449 (Modified)

STATEMENT OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE

STATEMENT

(Use several sheets if necessary)

Attorney Docket No.  
018543-000100US

Serial No.:  
08/921,633

Applicant: Gregory G. Raleigh et al.

Filing Date: August 27,  
1997

Group: 2734

Reference Designation

U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date (If Appropriate)
AA						

FOREIGN PATENT DOCUMENTS

Document No.	Date	Country	Class	Sub-class	Translation (yes/no)
AB					

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

CF AC	C.E. Shannon, "Mathematical Theory of Communications: Part 1 and Part II," The Bell System Technical Journal, pp. 379-423, 623-656, 1948.
CF AD	S. A. Fectel and H. Meyr, "Optional Feedforward Estimation of Frequency-Selective Fading Radio Channels using Statistical Channel Information," in Proc. SUPERCMM/ICC '92, vol. 2 (Chicago, IL), pp. 677-681, 1992.
CF AE	L.H. Brandenburg and A.D. Wyner, "Capacity of the Gaussian channel with Memory: The Multivariate Case," Bell Syst. Tech. Journ., vol. 53(5), pp. 745-78, May-June 1974.
CF AF	R.S. Cheng and S. Verdu, "Gaussian Multiaccess Channels with ISI: Capacity Region and Multiuser Water-Filling," IEEE Trans. Inform. Theory, vol. 39(3), pp. 773-85, May 1993.
CF AG	J. Salz, "Digital Transmission Over Cross-Coupled Linear Channels," AT & T Tech. Journ., vol. 64(6), pp. 1147-59, July-Aug. 1985.
CF AH	A. Duel-Hallen, "Equalizers for Multiple Input Multiple Output Channels and PAM Systems with Cyclostationary Input Sequences," IEEE Journ. On Sel. Areas in Comm., vol. 10(3), pp. 630-39, April 1992.
CF AI	J. Yang and S. Roy, "On Joint Transmitter and Receiver Optimization for Multiple-input Multiple-output (MIMO) Transmission Systems," IEEE Trans. Commun., vol. 42-(12), pp. 3221-31, December 1994.
CF AJ	J. Yang and S. Roy, "Joint Transmitter-Receiver Optimization for Multi-Input Multi-Output Systems with Decision Feedback," IEEE Trans. Information Theory, vol. 40(5), pp. 1334-47, September 1994.
CF AK	D.C. Cox and R.P. Leck, "Distributions of Multipath Delay Spread and Average Excess Delay for 910 Mhz Urban Mobile Radio Paths," IEEE Trans. Antennas and Prop., vol. AP-23, pp. 206-213, March 1975.
CF AL	S.B. Weinstein and P.M. Ebert, "Data Transmission by Frequency-Division Multiplexing Using the Discrete Fourier Transform," IEEE Transactions on Communications, vol. 19(5), pp. 628-34, October 1971.
CF AM	A. Ruiz, J.M. Cioffi, and S. Kasturia, "Discrete Multiple Tone Modulation with Coset Coding for the Spectrally Shaped Channel," IEEE Trans. Commun., vol. 40(6), pp. 1012-23, June 1992.
CF AN	R.M. Gray, "On the Asymptotic Eigenvalue Distribution of Toeplitz Matrices," IEEE Trans. Information Theory, vol. Vol 18, pp. 725-730, June 1972.
CF AO	G. Forney, "Maximum-Likelihood Sequence Estimation of Digital Sequences in the Presence of Intersymbol Interference," IEEE Trans. Inform. Theory, vol. IT-18(3), pp. 363-378, May 1972.

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EXAMINER: Initial if reference

considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1449.WP 4/95

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PTO-1449 (Modified) OFFICE OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	Attorney Docket No. 018543-000100US	Serial No.: 08/921,633
	Applicant: Gregory G. Raleigh et al.	
	Filing Date: August 27, 1997	Group: 2734

## Reference Designation

## U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date (If Appropriate)
___ AP						
___ AQ						
___ AR						

## FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub-class	Translation (yes/no)
___ AQ						

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

<u>CF</u> AT	J.L. Holsinger, "Digital Communications Over Fixed Time-Continuous Channels With Memory, with Special Application to Telephone Channels," M.I.T. Research Laboratory Electronics Report, vol. 430, 1964.
<u>CF</u> AU	T.M. Cover and J.A. Thomas, Elements of Information Theory. New York: John Wiley, chapter 2, pps. 12-49, chapter 8, pps. 183-223, chapter 10, pps. 239-265 1991.
<u>CF</u> AV	R.J. Muirhead, Aspects of Multivariate Statistical Theory, New York: John Wiley, chapters 4 and 5, 1982.
<u>CF</u> AW	W.C. Jakes, Microwave Mobile Communications. New York: John Wiley, chapters 1, 5 and 6, 1974.
<u>CF</u> AX	W. R. Braun and U. Dersch, "A Physical Mobile Radio Channel Model," IEEE Trans. Vehicular Technology, vol. 40, pp. 472-482, May 1991.
<u>CF</u> AY	A.E. Bryson and T.C. Ho, Applied Optimal Control, Washington D.C. Hemisphere Publishing, pp. 24-29, 1968.
<u>CF</u> AZ	S. Kasturia, J. Aslanis, and J.M. Cioffi, "Vector Coding for Partial Response Channels," IEEE Transactions on Information Theory, vol. 36(4), pp. 741-62, July 1990.

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*Chieh Mei Fu*

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1449.WP 4/95

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PTO-1449 (Modified)

U.S. DEPARTMENT OF PATENTS AND PUBLICATIONS FOR

APPLICANT'S INFORMATION DISCLOSURE

STATEMENT

(Use several sheets if necessary)

Attorney Docket No. 018543-000100US	Serial No.: 08/921,633
Applicant: Gregory G. Raleigh et al.	
Filing Date: August 27, 1997	Group: 2734

Reference Designation U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date (If Appropriate)
<u>CF</u> BA	5,510,799	4/23/96	Wishart	342	373	6/8/93
___ BB						
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FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub-class	Translation (yes/no)
<u>CF</u> BD	WO 95/22873	8/24/95	WIPO			
<u>CF</u> BE	WO 96/30964	10/3/96	WIPO			
<u>CF</u> BF	EP0253465 A1	3/25/87	EP			

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

<u>CF</u> BG	E. Biglieri, D. Divsalar, P.J. Mclane, and M.K. Simon, Introduction to Trellis Coded Modulation with Applications. New York: Macmillan Publishing, 1991.
<u>CF</u> BH	P. Lancaster, Theory of Matrices. New York: Academic Press, chapter 2, 1969.
<u>CF</u> BI	G.G. Raleigh and J.M. Cioffi, "Spatio-Temporal Coding for Wireless Communications." Submitted to IEEE Transactions on Communications, January 1996.
<u>CF</u> BJ	Justin C.-I. Chuang, "Burst Coherent Demodulation with Combined Symbol Timing, Frequency Offset Estimation, and Diversity Selection," IEEE Transactions on Communications, vol. 39, no.7, pp. 1157-1164, July 1991.
<u>CF</u> BK	Leonard J. Cimini, Jr., "Analysis and Simulation of a Digital Mobile Channel Using Orthogonal Frequency Division Multiplexing," IEEE Transactions on Communications, ol. Co. 33, No. 7, pp. 665-675, July 1985.
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FORM PTO-1449 (Modified)		Attorney Docket No. 018543-000100US		Serial No.: 08/921,633	
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicants: Gregory G. Raleigh et al.			
		Filing Date: August 27, 1997		Group: 2734	
Reference Designation <b>SEP 29 1998</b> U.S. PATENT DOCUMENTS					

Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date (If Appropriate)
<u>CF</u> AA	4,710,944	12/1/87	Nossen	375	40	10/17/86
<u>CF</u> AB	5,228,025	7/13/93	Le Floch et al.	370	20	1/31/91
<u>CF</u> AC	5,315,584	5/24/94	Savary et al.	370	40	12/17/91
<u>CF</u> AD	5,515,378	5/7/96	Roy, III et al.	375	95.1	12/12/91
<u>CF</u> AE	5,548,819	8/20/96	Robb	455	59	8/7/95
<u>CF</u> AF	5,592,490	1/7/97	Barratt et al.	370	310	1/20/95
<u>CF</u> AG	5,649,287	7/15/97	Forssen et al.	370	310	3/29/95
___ AH						
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FOREIGN PATENT DOCUMENTS						
	Document No.	Date	Country	Class	Sub-class	Translation (yes/no)
<u>CF</u> AM	0 253 465 B1	3/25/87	EPO			
___ AN						
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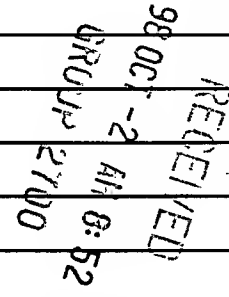
  

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)	
<u>CF</u> AR	Ohkawa, Kouichi, "Performance of Multicarrier Trellis-Coded 8PSK Using Frequency Hopping in Rayleigh Fading Channels," National Conference Publication - Institution of Engineers, Australia, National Conference, vol. 1, p. 145-149, November 20-24, 1994.
<u>CF</u> AS	Sourour, Essam A., "Performance of Orthogonal Multicarrier CDMA in a Multipath Fading Channel," IEEE Transactions on Communications, vol. 44, no. 3, p. 356-367, March 1996.
<u>CF</u> AT	Ichikawa, Hirofumi, "Frequency Diversity Effects in Multicarrier Digital Radio Systems," Electronics and Communications in Japan, Part 1, Vol. 74, No. 8, p. 70-77, August 1991.

EXAMINER <u>Chait N. Tan</u>	DATE CONSIDERED <u>11/27/00</u>
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 (Modified)		Attorney Docket No. 018543-000100US	Serial No.: 08/921,633
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicants: Gregory G. Raleigh et al.	
		Filing Date: August 27, 1997	Group: 2734
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)			
	CF AD	Gudmundson, Mikael, "Spectral Efficiency of a Multitone Frequency Hopping System for Personal Communication Systems," IEEE Vehicular Technology Conference, Part 3 (of 3) Stockholm, Vol. 3, p. 1650-1654, June 8-10, 1994.	
	CF AV	Gulliver, T. Aaron, "Order Statistics Diversity combining in Worst Case Noise and Multitone Jamming," IEEE Vehicular Technology Conference, Vol. 2, p. 804-809, July 25-28, 1995.	
	CF AW	Monnier, R., "Digital Television Broadcasting with High Spectral Efficiency," IEEE Conference Publication no. 358, p. 380-384, July 1992.	
	CF AX	Del Re, Enrico, "Digital Multicarrier Demodulator for Regenerative Communication Satellites," Alta Frequenza, Vol. 57, no. 10, p. 545-559, Dec. 1988.	
	CF AY	Omori, Youko, "Multicarrier 16QAM System in Land Mobile Communications," IEICE Transactions on Communications, Vol. E77-B, no. 5, p. 634-640, May 1994.	
	CF AZ	Ananasso, Fulvio, "Clock Synchronous Multicarrier Demodulator for Multi-Frequency TDMA Communications Satellites," IEEE International Conference on Communications, Vol. 3, p. 1059-1063, 1990.	
	CF BA	Friese, M., "Multicarrier Modulation with Low Peak-to-Average Power Ratio," Electronics Letters, Vol. 32, No. 8, p. 713-714, April 11, 1996.	
	CF BB	Benyassine, Adil, "Optimal Subchannel Structuring and Basis Selection for Discrete Multicarrier Modulation," IEEE Communication Theory Mini-Conference, Proceedings, CTMC, p. 97-101, 1995.	
	CF BC	Sawahashi, M., "Multicarrier 16QAM Transmission with Diversity Reception," Electronics Letters, Vol. 32, no. 6, p. 522-523, March 14, 1996.	
	CF BD	Daffara, Flavio, "A New Frequency Detector for Orthogonal Multicarrier Transmission Techniques," IEEE 45th Vehicular Technology Conference, p. 804-809, July 25-28, 1995.	
___ BE			
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EXAMINER <i>Chad W. F.</i>		DATE CONSIDERED <i>1/27/00</i>	

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FORM PTO-1449 (Modified)

Attorney Docket No.: 18543-000100

Application No.:

08/921,633

LIST OF PATENTS AND PUBLICATIONS  
FOR APPLICANT'S INFORMATION  
DISCLOSURE STATEMENT (Use several  
sheets if necessary)

Applicant: GREGORY G. RALEIGH, et al.

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Filing Date: August 27, 1997

Group: 2734

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Group 2700

Reference Designation

## U.S. PATENT DOCUMENTS

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## FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub-class	Translation (Yes/No)

**OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)**

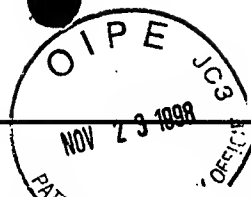
AA CF	P.A. Voois, "Two-dimensional Signal Processing for Magnetic Storage Systems," <i>Ph.D. Thesis, Stanford University, Stanford, CA</i> , pp. 1-136 (December 1993).

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<b>Form 1449 (Modified)</b>  <b>Information Disclosure Statement By Applicant</b>  (Use Several Sheets if Necessary)	Atty Docket No.	CISCP601
	Application No.:	08/921,633
	Inventor	Gregory G. Raleigh et al.
	Group	2786
	Filing Date	November 19, 1998

**U.S. Patent Documents**

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	A						
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**Foreign Patent or Published Foreign Patent Application**

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
							Yes	No
CF	L	WO 98/09381	3/5/98	PCT	<del>    </del>	<del>    </del>		
CF	M	WO 98/09395	3/5/98	PCT	<del>    </del>	<del>    </del>		
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**Other Documents**

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
CF	R	J. Hirono, M. Saito and C. Kamise, Digital Terrestrial Television Broadcasting with OFDM – A Study on the Performance of Single Frequency Networks - International Broadcasting Convention, p. 178-183 (September, 1996)
	S	
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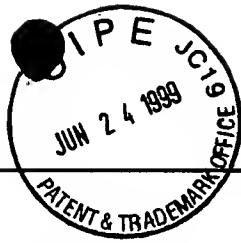
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<b>Form 1449 (Modified)</b>  <b>Information Disclosure Statement By Applicant</b>  (Use Several Sheets if Necessary)	Atty Docket No. CISC601	<b>RECEIVED</b> <b>JUN 29 1999</b> <b>Group 2700</b>
	Application No.: 08/921,633	
	Inventor JONES et al.	
	Group 2786	
	Filing Date August 27, 1997	

**U.S. Patent Documents**

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
CF	A	4,337,376	06/1982	Gruenberg	179	2 EB	12/1979
CF	B	5,345,599	09/1994	Paulraj et al.	455	49.1	02/1992
CF	C	5,471,647	11/1995	Gerlach et al.	455	63	04/1993
CF	D	5,479,444	12/1995	Malkamaki et al.	375	231	02/1994
CF	E	5,566,209	10/1996	Forssen et al.	375	262	02/1994
CF	F	5,634,199	05/1997	Gerlach et al.	455	63	04/1995
CF	G	5,752,173	05/1998	Tsujimoto	455	137	06/1995
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**Foreign Patent or Published Foreign Patent Application**

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**Other Documents**

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
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Examiner <i>Chad M. L.</i>	Date Considered <i>1/29/00</i>	Group 2700

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Form 1449 (Modified)	Atty Docket No. CISC601
Information Disclosure Statement By Applicant	Application No.: 08/921,633
	Inventor RALEIGH et al.
	Group 2734
(Use Several Sheets if Necessary)	Filing Date August 27, 1997

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
CF	A	5,134,715	7/1992	Parl et al.	455	64	11/1989
CF	B	5,642,353	6/1997	Roy, III et al.	370	329	6/1995
CF	C	5,691,727	11/1997	Cyzs	342	361	12/1995
CF	D	5,809,019	9/1998	Ichihara et al.	370	334	4/1996
CF	E	5,886,988	3/1999	Yun et al.	370	329	12/1996
CF	F	5,966,094	10/1999	Ward et al.	342	373	10/1997

Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
							Yes	No
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Other Documents

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
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Examiner	Date Considered	
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